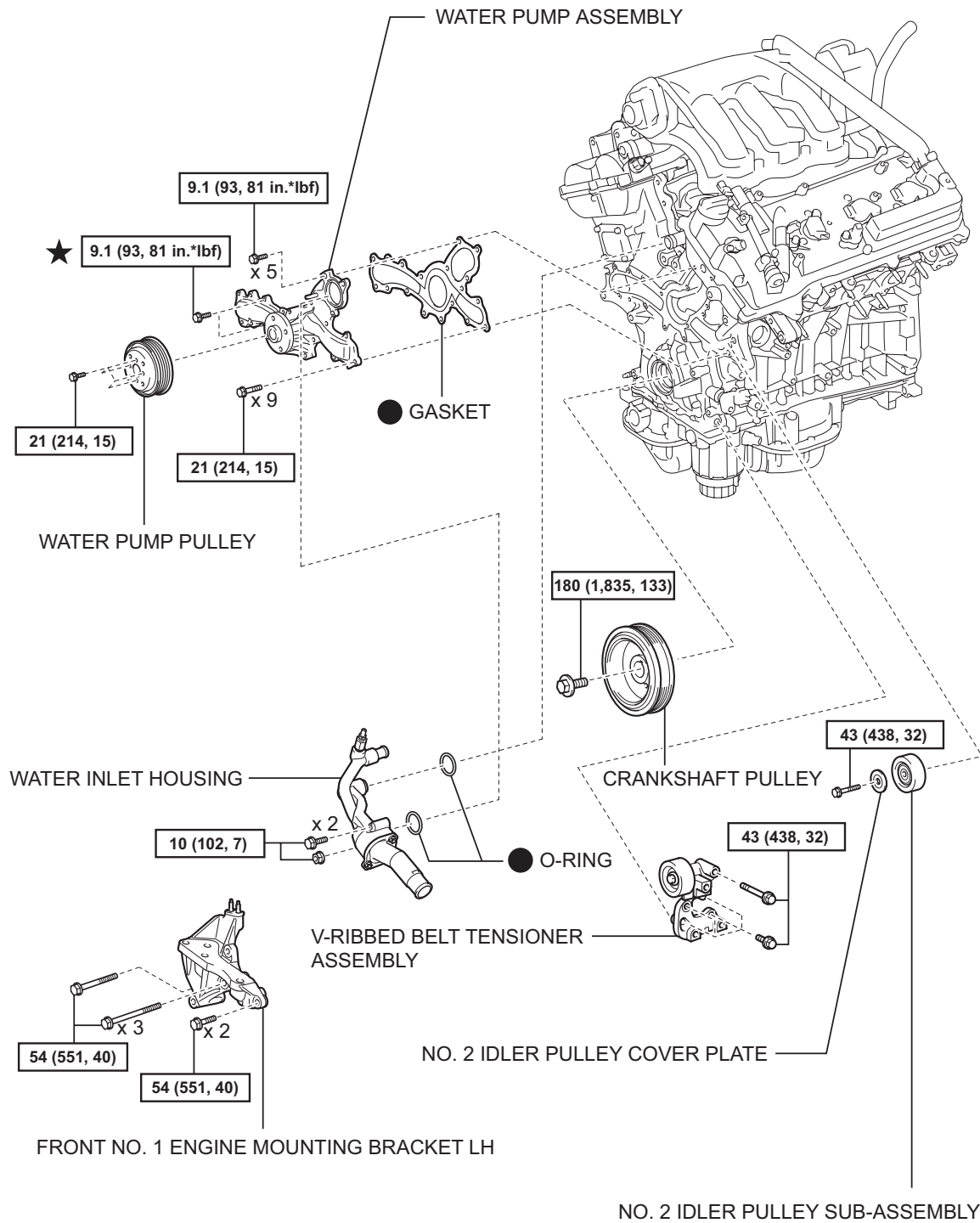


WATER PUMP

COMPONENTS



N*m (kgf*cm, ft.*lbf) : Specified torque

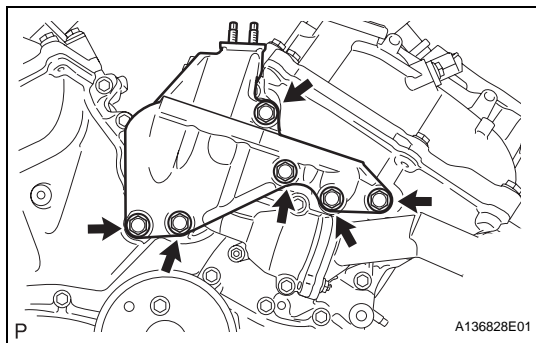
● Non-reusable part

★ Precoated part

REMOVAL

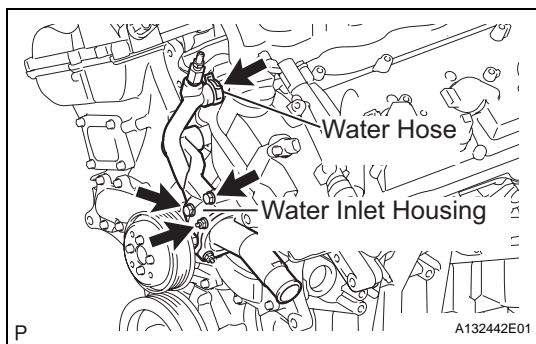
1. REMOVE ENGINE ASSEMBLY

- (a) Remove the engine (see page [EM-21](#)).



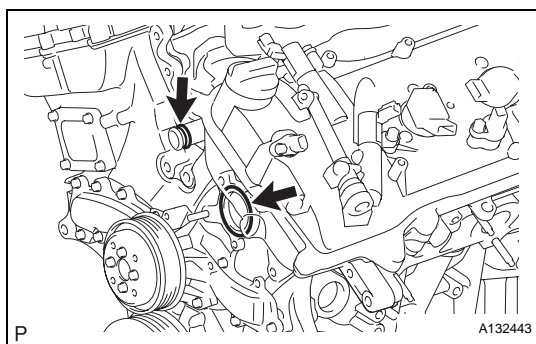
2. REMOVE FRONT NO. 1 ENGINE MOUNTING BRACKET LH

- (a) Remove the 6 bolts and mounting bracket.



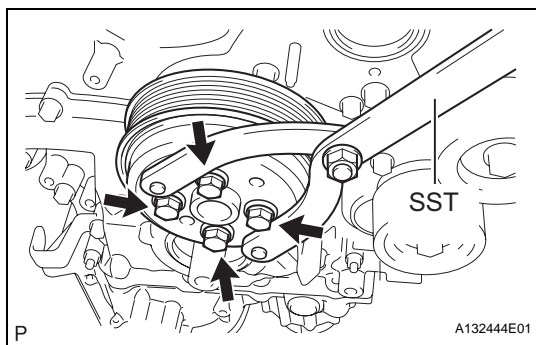
3. REMOVE WATER INLET HOUSING

- (a) Disconnect the water hose.
(b) Remove the 2 bolts, nut and water inlet housing.



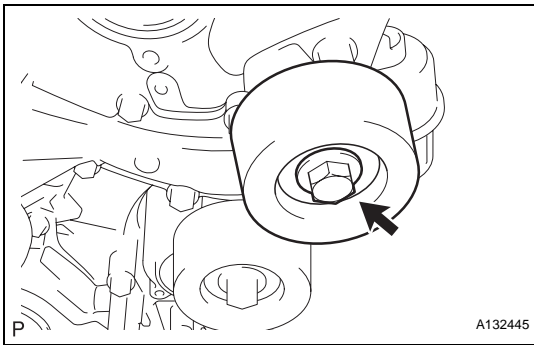
- (c) Remove the water inlet housing No. 1 gasket and water outlet pipe O-ring.

4. REMOVE CRANKSHAFT PULLEY (See page [EM-54](#))



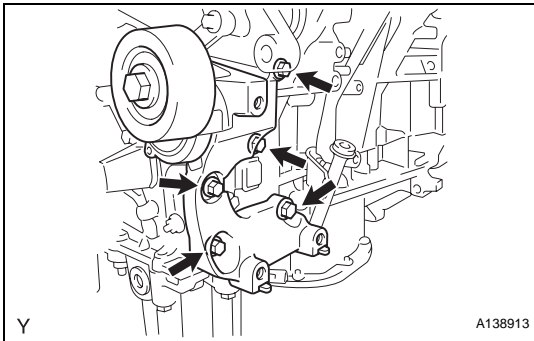
5. REMOVE WATER PUMP PULLEY

- (a) Using SST, hold the water pump pulley.
SST 09960-10010 (09962-01000, 09963-00700)
(b) Remove the 4 bolts and water pump pulley.



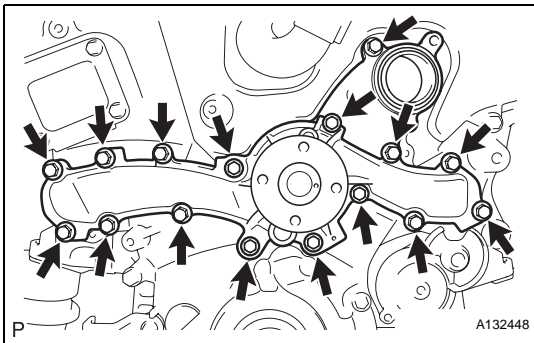
6. REMOVE NO. 2 IDLER PULLEY SUB-ASSEMBLY

- Remove the bolt, No. 2 idler pulley cover plate and No. 2 idler pulley.



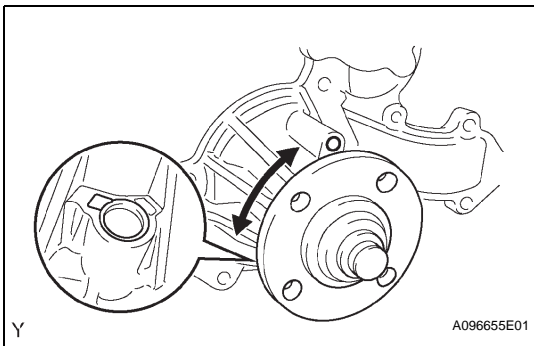
7. REMOVE V-RIBBED BELT TENSIONER ASSEMBLY

- Remove the 5 bolts and V-ribbed belt tensioner assembly.



8. REMOVE WATER PUMP ASSEMBLY

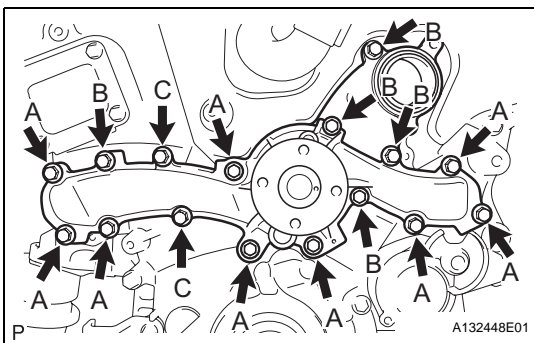
- Remove the 16 bolts, water pump and water pump gasket.



INSPECTION

1. INSPECT WATER PUMP ASSEMBLY

- Visually check the drain hole for coolant leakage. If leakage is found, replace the water pump assembly.
- Turn the pulley, and then check that the water pump bearing moves smoothly without making a clicking noise. If it does not move smoothly, replace the water pump assembly.



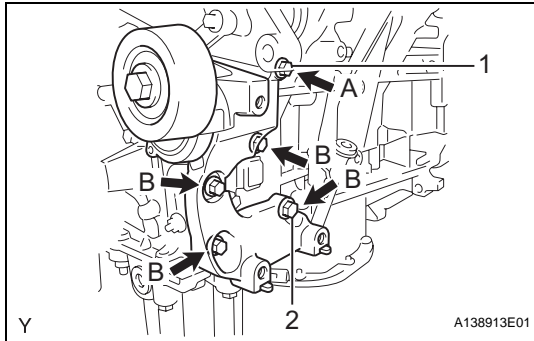
INSTALLATION

1. INSTALL WATER PUMP ASSEMBLY

- Install a new water pump gasket and the water pump with the 16 bolts.
Torque: 21 N*m (214 kgf*cm, 15 ft.*lbf) for bolt A
9.1 N*m (93 kgf*cm, 81 in.*lbf) for bolt B and C

NOTICE:

- Be sure to replace the 2 C bolts with new ones or reuse them after applying adhesive.
Adhesive:
Toyota Genuine Adhesive 1344, Three Bond 1344 or Equivalent
- Make sure that there is no oil on the threads of the A bolts.

**2. INSTALL V-RIBBED BELT TENSIONER ASSEMBLY**

- (a) Temporarily install the V-ribbed belt tensioner with the 5 bolts.

HINT:

Each bolt length is as follows:

A: 70 mm (2.76 in.)

B: 30 mm (1.30 in.)

- (b) Install the V-ribbed belt tensioner by tightening the bolt 1 and bolt 2 in the order shown in the illustration.

Torque: 43 N*m (438 kgf*cm, 32 ft.*lbf)

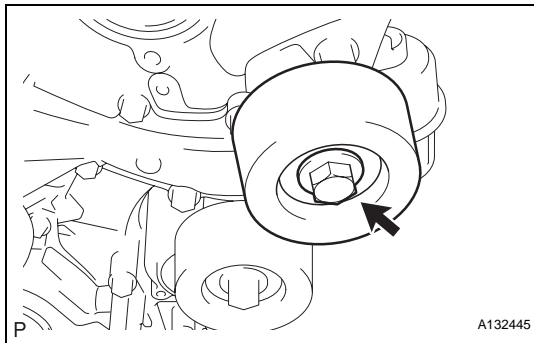
- (c) Tighten the other bolts.

Torque: 43 N*m (438 kgf*cm, 32 ft.*lbf)

3. INSTALL NO. 2 IDLER PULLEY SUB-ASSEMBLY

- (a) Install the No. 2 idler pulley cover plate and No. 2 idler pulley with the bolt.

Torque: 43 N*m (438 kgf*cm, 32 ft.*lbf)

**4. INSTALL WATER PUMP PULLEY**

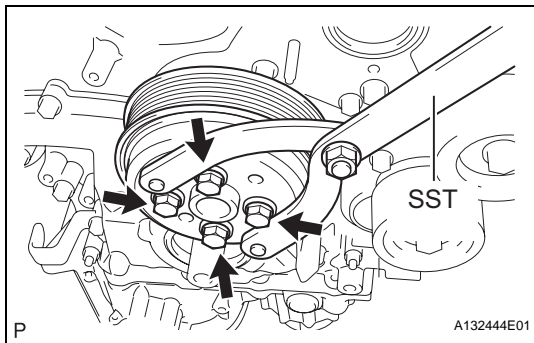
- (a) Temporarily install the water pump pulley with the 4 bolts.

- (b) Using SST, hold the water pump pulley.

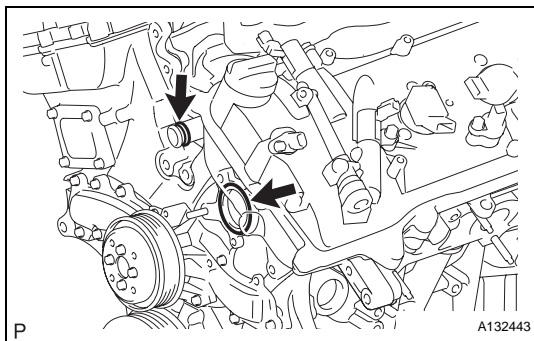
SST 09960-10010 (09962-01000, 09963-00700)

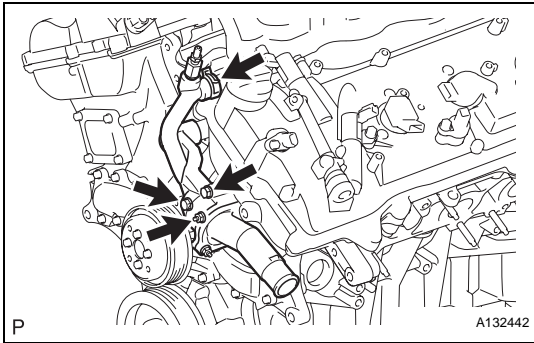
- (c) Tighten the 4 bolts.

Torque: 21 N*m (214 kgf*cm, 15 ft.*lbf)

5. INSTALL CRANKSHAFT PULLEY (See page [EM-126](#))**6. INSTALL WATER INLET HOUSING**

- (a) Install a new water inlet housing No. 1 gasket and water outlet pipe O-ring.





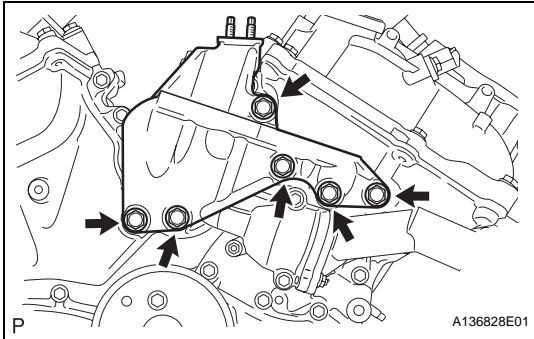
- (b) Install the water inlet with the 2 bolts and nut.

Torque: 10 N*m (102 kgf*cm, 7 ft.*lbf)

NOTICE:

Be careful not to allow the O-ring to get caught between the parts.

- (c) Connect the water hose.



7. INSTALL FRONT NO. 1 ENGINE MOUNTING BRACKET LH

- (a) Install the front No. 1 engine mounting bracket LH with the 6 bolts.

Torque: 54 N*m (551 kgf*cm, 40 ft.*lbf)

NOTICE:

- Install the water inlet and mounting bracket within 15 minutes after installing the chain cover.
- Do not start the engine for at least 2 hours after installation.

8. INSTALL ENGINE ASSEMBLY

- (a) Install the engine (see page [EM-31](#)).